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Bibliography

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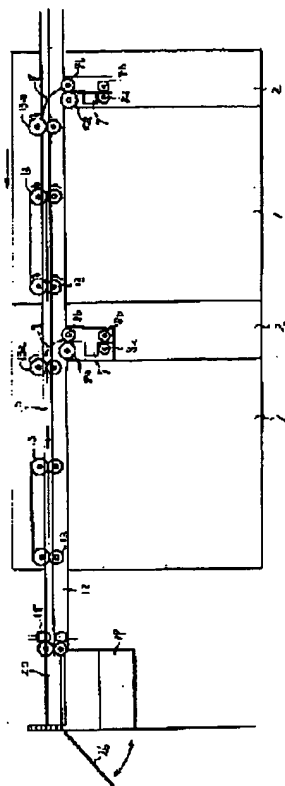
Summary

(57) [Abstract]

[Objects of the Invention] The fall accident of the bill under conveyance never occurs, moreover, it can prevent lap conveyance, can be made to expropriate it tidily also to a stacker, and makes installation the transport device of the bill is easy and it is made to become cheap on the whole.

[Elements of the Invention] Suppose that it has the delivery mechanism and truth-or-falsehood judging sensor which send the bill which should insert the longitudinal direction of a bill as a vertical direction, and was inserted into the slot for bills in the slot for bills formed in the machine between bases to the upper part or a lower part, it turns the bill made into Shinsei 90 degrees, and a bill side is conveyed to the stacker of **** as a floor or a ceiling side, and an parallel state.

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CLAIMS

[Claim(s)]

[Claim 1] It is the transport device of the bill characterized by having the delivery mechanism and truth-or-falsehood judging sensor which send the bill which should insert the slot for bills formed in the machine between bases as a vertical direction, and was inserted [slot for bills] into the slot for bills in the longitudinal direction of a bill to the upper part or a lower part, turning the bill made into Shinsei 90 degrees, and conveying a bill side to the stacker of *** as a floor or a ceiling side, and an

parallel state.

[Claim 2] Said conveyance way is the transport device of the bill according to claim 1 characterized by being formed so that it may pinch with a belt, a pulley, or a salient roller made into the interval of a size shorter than the length of a thousand-yen bill.

[Claim 3] The machine between bases is the transport device of the bill according to claim 1 or 2 which an independent game base and every one set are considered as a set, and is characterized by establishing the ***** bill position for each machine conveyance way between bases in amendment guide joint on the conveyance way.

[Claim 4] The claim 1 characterized by establishing the adjustment mechanism with a delivery roller, a quiescence roller, etc. in order to pile up all over a conveyance way and to adjust delivery at a time to one sheet, a claim 2, or the transport device of a bill according to claim 3.

[Claim 5] The claim 1 characterized by pivoting in a part for the transducer of a slot for bills and a conveyance way the piece of a stopper-cum-a guide which prevents a polymerization with the bill of existing **, a claim 2, the transport device of a bill according to claim 3 or 4.

[Claim 6] The claim 1 characterized by having a denomination distinction sensor near the terminal of a conveyance way, operating a guide mechanism according to each denomination, and making it pay in installments to an exclusive stacker respectively, a claim 2, a claim 3, the transport device of a bill according to claim 4 or 5.

[Claim 7] The claim 1 characterized by enabling installation of a bypass on a conveyance way, and taking a ** term at the time of conveyance rush hours of a bill, a claim 2, a claim 3, a claim 4, a claim 5, or the transport device of a bill according to claim 6.

[Claim 8] The frame which forms a conveyance way is the transport device of the bill according to claim 1 characterized by having a cutting part, and being able to ***** and use him for the linear dimension for which it asks in a pitch suitably as a long thing.

[Claim 9] The transport device of the bill according to claim 1 characterized by arranging a slip pulley or a salient roller etc. which synchronized the sending portion of a conveyance way with the pulley by the side of a discernment machine from the slot for bills, and having lost the ***** load to a bill.

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DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Industrial Application] this invention is in amusement centers, such as a transport device of a bill especially pachinko, and a slot machine, and relates to the transport device of the bill for even a stacker conveying the bill inserted in the machine between bases the loan of the ball installed between the bases of each game base, or a game medal, or for exchange.

[0002]

[Description of the Prior Art] Conventionally, the slot for bills in the above-mentioned machine between bases shall make a bill side meet [of a bill] the game base side from a short hand, shall be inserted, and has become conveyance pinched to the felt belt prepared in the tooth back of a game base, i.e., form that a bill side is conveyed in a game base tooth back and the met direction.

[0003]

[Problem(s) to be Solved by the Invention] however, the bill which the accident to which a bill falls from between felt belts during conveyance occurred frequently if it was in the transport device of this conventional bill, and was newly inserted with the bill under conveyance -- selling -- ** -- it did not work but the overlapping jam state was also produced

[0004]

[Objects of the Invention] then, this invention was made paying attention to the trouble of the starting Prior art, cancels this trouble, the fall accident of the bill under conveyance never occurs, moreover, lap conveyance can be prevented, it can be made to expropriate tidily also to a stacker, and installation is aimed at offering the transport device which is the bill which is easy and will become cheap on the whole

[0005]

[Means for Solving the Problem] In order to attain this purpose, the transport device of the bill concerning this invention shall insert the longitudinal direction of a bill for the slot for bills formed in the machine between bases as a vertical direction. It is characterized by having the delivery mechanism and truth-or-falsehood judging sensor which send the bill inserted into the slot for bills to the upper part or a lower part, turning the bill made into Shinsei 90 degrees, and conveying a bill side to the stacker of *** as a floor or a ceiling side, and an parallel state.

[0006]

[Function] By having considered as the above-mentioned composition, never, falling of a bill is lost, it becomes easy to attach lap prevention of a bill and the attachment of a ** term mechanism, and can also do institution work the easy thing.

[0007]

[Example] Next, the example of this invention is explained with reference to a drawing. The front view showing the outline composition of the transport device of the bill with which drawing 1 carried out this invention, the plan in which drawing 2 is the same and showing a conveyance way, The side elevation and drawing 4 which drawing 3 is the same and show the slot-for-bills portion of the machine between bases The plan of the terminal portion of the conveyance way in dealing with 3 denominations, The front view of the mechanism in which it sends at a time one bill which drawing 5 is the same, and front view and drawing 6 have in a conveyance way, and is formed near the stacker, The side elevation of the rotation roller, the plan in which drawing 8 is the same and showing the pinching pulley drive of a conveyance way with the same drawing 7 , Front view, front view in which drawing 10 is the same and showing the delivery portion from a discernment machine to a conveyance way with the same drawing 9 , A plan, front view in which drawing 12 is the same and showing the overall composition with the same drawing 11 , The front view in which drawing 13 is the same and showing the joint portion of a conveyance way, a plan and the front view in which drawing 15 is the same and showing the installation state of a bypass with the same drawing 14 , and drawing 16 are the partial front view showing the cutting part who similarly makes **** of a conveyance way possible.

[0008] It is shown in these drawings, and 1 and 1 -- shows game bases, such as pachinko and a slot machine, and each of that game base 1, the machine 2 between bases of 1 -- which can perform a loan or exchange of a ball or a game medal, without a game person leaving a seat in between, and 2 -- are installed. The insertion mouth 3 of a bill is longwise formed in the transverse plane at the machine 2 between this base, and while the bill met the longitudinal direction, it comes to put an edge to this insertion mouth 3.

[0009] Although it has the switching sensor of the optical system which detects insertion near the opening of this insertion mouth 3 and a loading mechanism is made started, this insertion mouth 3 is equipped with the rise-and-fall object 4 which made the bottom cross section the shape of a upward KO character, and it pushes up to the discernment machine 5 formed above the insertion mouth 3. Although the bill made into Shinsei by this discernment machine 5 is sent further upwards, when it considered as ****, the rise-and-fall object 4 fell as it is, and the **** is returned to the insertion mouth 3 shell exterior by the knockout section 6.

[0010] A true tag can be further pulled up from the discernment machine 5 upwards with the pulleys 8a and 8b of the size which made the motor 7 the driving source, and 90 directional changes will be gradually carried out along with the guide lever 9, and it will be sent into the bill conveyance way 10. Moreover, when said guide lever 9

has a bill in having existing conveyed all over the conveyance way 10, the stopper which stops advance of the bill in having existing conveyed temporarily shall also be made to serve a double purpose until the new bill from the discernment machine 5 goes into the conveyance way 10.

[0011] Moreover, the conveyance way 10 of said bill has the parallel frames 11 and 11 with width of face of about about 100mm, and the up-and-down coverings 12 and 12, and the pinching pulley 13 and 13 -- are attached between the frame 11 and 11 every [which is a pitch shorter than the length of a thousand-yen bill] 70-140mm. As shown in this pinching pulley 13, the double pulley 14 as show 13 -- to drawing 2 , or drawing 8 , the pulley 15 with a gear tooth and 15 -- shall be hung about by the belt 16 with a gear tooth for every axis, and plurality shall interlock by one motor 17.

[0012] in addition, the bill which 13a of this pinching pulley 13 and 13 -- which is in induction from the discernment machine 5 inside is the free slip pulley which synchronized with the pulleys 8a and 8b of the size for delivery in the discernment machine 5, and is produced from a difference of a rotational frequency -- tearing off -- etc. -- breakage accident is prevented

[0013] Furthermore, it has the sensor 18 of the penetrated type optical system which checks passage of a bill near the terminal of the conveyance way 10 of a bill, and by sensing of this sensor 18, a stacker mechanism will start and a bill will be contained to a stacker 19. In addition, recycling use of this stacker 19 can also be carried out as an object for change as the automatic loan machine and money-changing machine which are installed in ****, and combination.

[0014] It is for the bill which passed through between the passage check sensors 18 of said bill to go into the rotation guide bars 20 and 20 which carried out the shape of a cross section of S characters of a couple, to stop, and to be entrapped into a stacker 19 in the rotation operation by gear drive. Moreover, not only a thousand-yen bill but the guide plate 22 which the distinction sensor 21 (optical system) of a penetrated type denomination is attached, and forces a course according to the denomination when three denominations of a ten thousand yen bill of 5000 yen are made usable will be supported pivotably.

[0015] This guide plate 22 by the right inverse rotation of the rotation guide bars 20 and 20 which it was made to go straight on in the case of a large denomination bill, and was described above Exclusive stacker 19a of a vertical position, Pay in installments to 19b, and in the case of a thousand-yen bill, close a guide plate 22, and it leads it to a fork road 23 by the exclusive pulley 24 and 24 --. It can check by the passage sensor 25, can send to between the rotation guide bar 20 of exclusive use, and 20, and can expropriate to stacker 19c only for thousand-yen bills, and recycling use only of this thousand-yen bill can be carried out. In addition, 26 in drawing and 26 -- is the door of the sake for [which was attached to a stacker 19, or 19a, 19b and 19c] extraction.

[0016] Furthermore, it is desirable, although the delivery mechanism per sheet shown in drawing 6 and drawing 7 as the management although it is possible that a

bill accumulates is attached, since one sheet is put one by one at a time into a bill by the stacker 19, although it is not what was restricted to the type for 3 denominations. It consists of an indexing roller 27 which formed this delivery mechanism in the shape of a spool with urethane etc., and formed Giza 27b and 27b— in the major-diameter sections 27a and 27a, and the indexing roller 27 and the quiescence roller 28 which had distance a little, and in order to press down a bill to this side and to make one sheet slip at a time to it, a pressure plate (guide plate) 29 will be attached. In addition, the quiescence roller 28 can raise the precision which it sends one more sheet at a time by carrying out loose inverse rotation if needed.

[0017] Moreover, in that case, although said conveyance way 10 or frames 11 and 11 can be fabricated as attachment material of the cassette type corresponding to the game base 1 and the set of the machine 2 between bases, the amendment amendment guides 31 and 31 will be attached in each part's joint portion so that neither the guides 30 and 30 for making the bill shown in drawing 13 and drawing 14 open for free passage nor the travelling direction of a bill may shift.

[0018] On the contrary, the frames 11 and 11 as said conveyance way 10 fabricate an inside as smooth long material, form suitably the cutting part 34 as shows drawing 16 , and 34 — outside in the pitch, and can also **** and use a part for required length.

[0019] Furthermore, the bypass 35 for 1:00 ** terms in case a bill is crowded can also be attached in the conveyance way 10. Depending on electromotion and the case, it is supported pivotably by the entrance of a bypass 35 so that a lever 36 can operate it also manually, and it can send out to the conveyance way 10 again at the time of a confusion dissolution, and this bypass 35 is good also as another-attaching as an option and carrying out.

[0020] The transport device of the bill concerning this example is constituted as mentioned above, and acts. Therefore, even if even a stacker 19 is in which part from the insertion mouth 3, dealing with the abnormal condition which can be carried out the evil of the operation and taken into consideration is made. Moreover, even if a trouble arises, instant processing can be constitutionally performed in the thing [opening and closing an arm top cover 12], and the need of making a mechanism stopping is also lost. Furthermore, since it considers as conveyance in which the bill side was made to meet a top panel and a floor line, even if a bill has some inclinations and level differences on the way, it will fully function. In addition, although [this example] a bill is led upwards, of course, it is also possible to lead below by changing a mechanism, a need person can choose freely, and since the conventional conveyance way etc. and conventional use side (****) of a coin differ from each other, the maximum effective use is made mutually.

[0021]

[Effect of the Invention] The transport device of the bill concerning this invention is constituted as mentioned above, and operates. Therefore, generating of the fall

accident of a bill like old entirely is lost, and it can also prevent accident, such as heavy delivery and breakage, beforehand. moreover, the composition to construction and a maintenance — doing — easy — a business top — putting — also touching — it decreases and can respond to an emergency trouble immediately from it being user-friendly And since the whole equipment can be managed with easy structure, it is cheap, and can supply and that failure arises also decreases very much.

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DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1] It is the front view showing the outline composition of the transport device of a bill.

[Drawing 2] It is the plan showing a conveyance way.

[Drawing 3] It is the side elevation showing the slot-for-bills portion of the machine between bases.

[Drawing 4] It is the plan of the terminal portion of the conveyance way in dealing with 3 denominations.

[Drawing 5] It is front view.

[Drawing 6] It is the front view of the mechanism in which it sends at a time one bill which is in a conveyance way and is formed near the stacker.

[Drawing 7] It is the side elevation of the rotation roller.

[Drawing 8] It is the plan showing the pinching pulley drive of a conveyance way.

[Drawing 9] It is front view.

[Drawing 10] It is the front view showing the delivery portion from a discernment machine to a conveyance way.

[Drawing 11] It is a plan.

[Drawing 12] It is the front view showing overall composition.

[Drawing 13] It is the front view showing the joint portion of a conveyance way.

[Drawing 14] It is a plan.

[Drawing 15] It is the front view showing the installation state of a bypass.

[Drawing 16] It is the partial front view showing the cutting part who makes **** of a conveyance way possible.

[Description of Notations]

- 1 Game Base
- 2 Machine between Bases
- 3 Insertion Mouth
- 4 Rise-and-Fall Object
- 5 Discernment Machine
- 6 Knockout Section
- 7 Motor
- 8a Large pulley
- 8b Small pulley
- 9 Guide Lever
- 10 Conveyance Way
- 11 Frame
- 12 Covering
- 13 Pinching Pulley
- 13a Induction pulley
- 19 Stacker
- 20 Rotation Guide Bar
- 21 Denomination Distinction Sensor
- 22 Guide Plate
- 23 Fork Road
- 27 Indexing Roller
- 28 Quiescence Roller
- 29 Pressure Plate
- 30 Guide Made to Open for Free Passage
- 31 Amendment Guide
- 34 Cutting Part
- 35 Bypass
- 36 Lever

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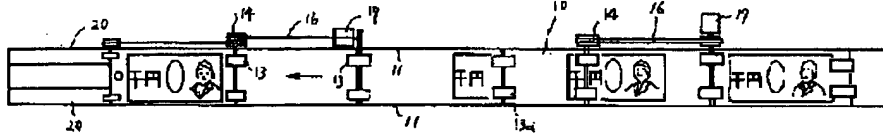
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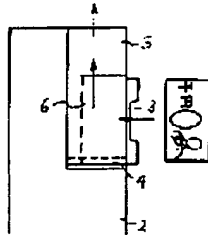
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DRAWINGS

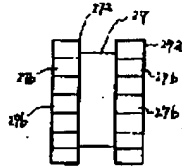
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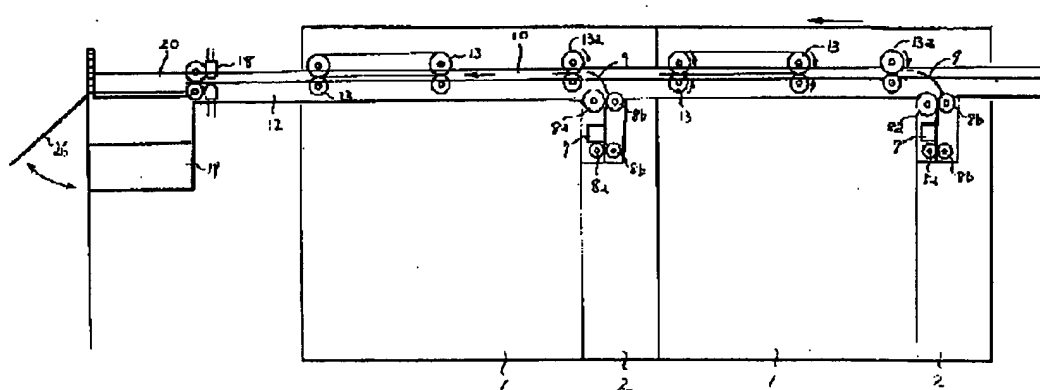
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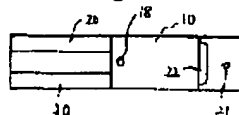
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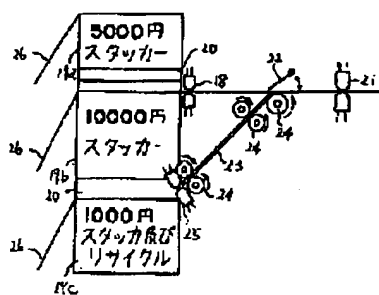
[Drawing 1]



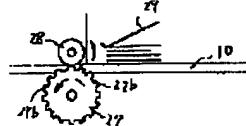
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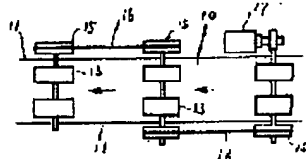
[Drawing 5]



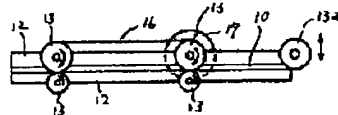
[Drawing 6]



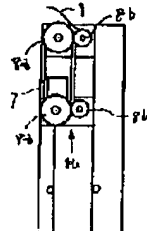
[Drawing 8]



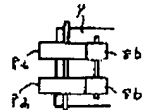
[Drawing 9]



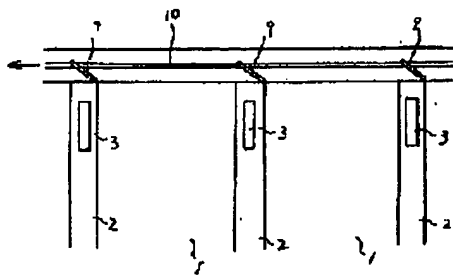
[Drawing 10]



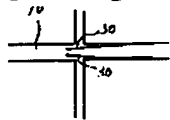
[Drawing 11]



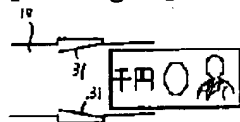
[Drawing 12]



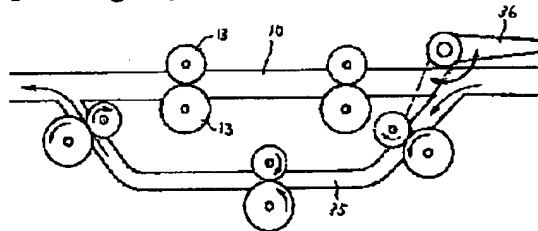
[Drawing 13]



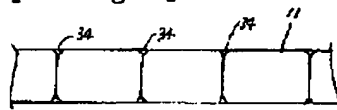
[Drawing 14]



[Drawing 15]



[Drawing 16]



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